ETC®

D60XTI™

Desire® Series

100V 115/120V 230/240V

GENERAL INFORMATION

ETC's Desire Series D60XTI brings the amazing control of the x7 color System™ and the long throw of a D60 to your facility for permanent installation. With its IP66 rating, this luminaire is ready for mounting inside or outside- whereever you need it. The Selador® x7 color system produces the widest range of spectrally-balanced saturated and tinted colour choices available. The D60XTI offers a rugged die-cast enclosure, noiseless fan-free operation and multiple lens options that can be changed on site.

D60XTI LED ARRAY OPTIONS
D60XTI luminaires are based on the x7 color system that uses seven different LED colours to achieve true, usable broad spectrum colour. The D60XTI luminaire is available with any one of the following x7 colour arrays to best suit the intended application:

- D60XTI Vivid™ – the x7 color system array balanced for best all-around use as a colour-changing wash luminaire
- D60XTI Lustr+™ – optimised with six colours plus high-intensity white LEDs to create an ideal front-light wash fixture. Full-range colour, with an emphasis on lighter colours and white
- D60XTI Ice™ – uses the cool colours of the x7 system to providecextra-high brightness colour in the blue end of the spectrum
- D60XTI Fire™ – uses the warm colours of the x7 system to provide extra-high brightness colour in the red end of the spectrum
- D60XTI Studio HD™ – Studio HD combines warm white and cool white LEDs for variable colour temperature mixing. Added to this are five carefully chosen LED colours from the Selador x7 color system to fill in the white LED spectral gaps. D60XTI Studio HD provides the richest variable white light possible in an LED luminaire

Also available in the following static white arrays:

- D60XTI Studio Daylight™ – Studio Daylight contains forty 5600K LEDs for high-intensity, non-variable cool-white output
- D60XTI Studio Tungsten™ – Studio Tungsten contains forty 3000K LEDs for high-intensity, non-variable warm-white output

ORDERING INFORMATION

Selador D60XTI

PART NO.	DESCRIPTION
7410A1205-0X	D60XTI Lustr+ wash luminaire, Black
7410A1201-0X	D60XTI Vivid wash luminaire, Black
7410A1203-0X	D60XTI Fire special wash luminaire, Black
7410A1204-0X	D60XTI Ice special wash luminaire, Black
7410A1202-0X	D60XTI Studio HD wash luminaire, Black
7410A1207-0X	D60XTI Studio Daylight wash luminaire, Black
7410A1206-0X	D60XTI Studio Tungsten wash luminaire, Black

Note: D60XTI luminaires ship with a hanging yoke, attached 1.5m power input cable, DMX in/out cable and a data termination board. Lenses and other accessories are not included.
Note: For white colour use -1X and for silver grey and custom colours use -5X as extension to above part numbers.

SPECIFICATIONS

GENERAL

- Easy setup via any RDM device, such as ETC Gateways and Gadget
- 60 LED variable colour-mixing light wash luminaire (colour-mixing luminaires)
- 60 LED white-light wash luminaire (static white luminaires)
- CE compliant, ETL listed to UL1598
- IP66-rated for exterior wet-location use
- Data termination board for easy installation (included)

PHYSICAL

- Rugged die-cast, all-metal housing
- Accessory ring for installation of secondary lenses
- Available in black, white, silver grey or custom colours
- Hanging yoke standard.
- Cable diameter: power Ø 9mm/ data Ø 8.6mm
- Effective Projected Area (EPA): X.XX

ELECTRICAL

- 100VAC to 240VAC 50/60 Hz universal power input
- Waterproof, 1.5m outdoor-rated power lead
- Up to five fixtures (15A max) may be fed on the same circuit
- Requires power from a non-dimmable source
- Inrush (for about 1 half-cycle)
  - 240V: 77A

LED*

- 50,000-hour LED life (50,000 hours to 70% intensity)
- 60 LUXEON® Rebel LED emitters
- Studio Daylight and Studio Tungsten use Rebel ES white light emitters for higher output

*See additional LED notes on page three

COLOUR

- Exclusive x7 color system seven-colour LED array
- Broad spectrum colour interacts seamlessly with conventional sources
- Beautifully illuminates skin tones and other objects for a natural appearance and high colour rendering
- Exclusive red-shift option emulates tungsten dimming performance (not available on static white luminaires)
- Studio HD array uses warm and cool white light emitters with additional deep-colour emitters
- Studio Tungsten and Studio Daylight provide good colour rendering at very high brightness

OPTICAL

- Primary field angle of 17° and beam angle of 8°
- Secondary lenses available for multiple beam spread options
- Lenses must be ordered separately
- Refer to accessories chart for lenses available

CONTROL

- DMX512 in and thru via termination board (included)
- See DMX Input Channel Profiles for operation modes
- 15-bit virtual dimming engine provides smooth, high-quality theatrical fades and minimises colour shift during dimming
- RDM functionality for address and setting changes

SPECIFICATIONS

THERMAL

- Ambient operating temperature of -20° to 40°C
- Active electronic thermal management for droop-free operation
- Noiseless, fan-free convection cooling for acoustically sensitive installations
- Luminaire is designed for continuous operation up to 40°C ambient temperature and requires free flow of air around luminaire housing

ADDITIONAL ORDERING INFORMATION

Fixture Accessories

PART NO.	DESCRIPTION
7410L1050	Wall-Mount Kit (Black)
7410K1051	Single Pole Mount Kit (Black)
7410K1052	Double Pole Mount Kit (Black)
7410K1071	Egg Crate Louvre Kit(Black)
7410K1072	Half-Shield Kit (Black)

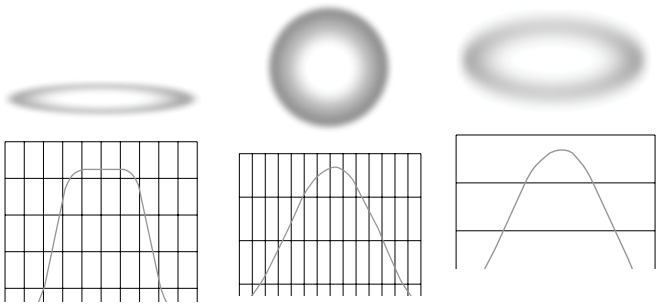
ADDITIONAL ORDERING INFORMATION

Secondary Lens Options

MODEL	DESCRIPTION: The following lenses are cut for D60XTI luminaires and create round, linear or oblong field patterns as described below. These lenses are not for use in Selador Classic™ (Vivid, Lustr®, Paletta™, etc.) fixtures.
Narrow Linear Field	Note: This is the same material as Selador Classic lenses. Not UV-stable, not for outdoors.
Round Field	Any one of the following round lenses may be installed permanently in the luminaires at the factory as a special order. UV-stable for outdoor use.
7410K1073	Very Narrow lens (round field)
7410K1074	Narrow lens (round field)
7410K1075	Medium lens (round field)
7410K1076	Wide lens (round field)
7410K1077	Extra Wide lens (round field)
Oblong Field	UV-stable for outdoor use
7410K1078	Narrow lens (oblong field)
7410K1079	Medium lens (oblong field)
7410K1080	Wide lens (oblong field)

http://www.etcconnect.com/docs/docs_downloads/miscdocs/Desire_vs_PAR_EA_revB.pdf

Typical Lens Field Profiles



Narrow Linear Round Oblong

Power Consumption at Full Intensity (Average)

MODEL	VOLTAGE (V)	CURRENT (A)	WATTS
D60XTI	240	1	124

NOTES ABOUT LED LUMINAIRES

All LED sources experience some lessening of light output and colour shift over time. LED output will vary with thermal conditions, which can be affected by ambient temperatures and orientation (see the D40 Ambient Temperature and Power Budgeting Guide for more details). Based on the LED manufacturer's B50 L70 specification, a Selador luminaire will achieve ~70% of its initial output after 50,000 hours of typical usage. In individual situations, LEDs will be used for different durations and at different levels. This can eventually lead to minor alterations in color performance, necessitating slight adjustment to presets, cues or programs.

CRI AND CQS RATINGS

Desire luminaires were evaluated for CRI and CQS performance using measured output spectrum and optimised mix solutions for a best spectral match to black body sources at 3200K and 5600K.

Fixture	CRI	CQS	Colour Fidelity	Duv
D60XTI Vivid at 3200K	87	89	89	0.000
D60XTI Vivid at 5600K	90	92	92	0.000
D60XTI Lustr+ at 3200K	86	88	88	0.000
D60XTI Lustr+ at 5600K	93	92	90	0.000
D60XTI Studio HD at 3200K	89	90	91	0.000
D60XTI Studio HD at 5600K	92	94	94	0.000
D60XTI Studio Daylight at 5600K	71	70	69	0.001
D60XTI Studio Tungsten at 3000K	86	86	86	0.001

All D60XTI Studio luminaire versions provide excellent colour rendering to the eye, particularly at higher colour temperature settings such as 5600K. In most cases the Duv is 0.000. A Duv rating of 0.000 indicates that the color mix used is exactly on the black body line, with no green or magenta tint.

Notes to videographers:

- All Desire luminaires use LUXEON Rebel ES emitters specified by the strictest binning standards. However, on-camera LED response varies with different cameras and settings. Daylight LEDs can appear slightly greener than other 5600K sources on camera.
- Luminaires with non-variable single-colour daylight arrays such as Studio Daylight may use standard colour correction filters (Rosco 3314, Rosco 3316) or similar to achieve the desired on-camera result.
- Camera tests using your specific set up are recommended to determine the best configuration.

CONTROL OPTIONS

User settings on D60XTI luminaires allow multiple operational modes and settings for either console operation via DMX protocol or standalone operation. The expanded LCD display provides easy navigation to all possible settings and choices. Some of the setting options are:

- Multiple DMX options ranging from a simple RGB profile – which effectively controls all seven LED colours via three channels – to nine-channel direct colour and intensity control
- Multiple dimming curve options
- Preset colors and sequences for stand-alone (no console required) operation
- White point selection – white light and colour behavior based on a specific colour temperature white light (i.e. 3200K, 5600K, etc)
- Loss of data behavior options – instant-off, hold last look for two minutes, etc.
- Output modes – three output options that offer the user a choice between maximum output and maximum consistency

See the user manual for a complete explanation of all of the control settings and options for the D60XTI

Quick Setups

To assist in managing the numerous control and luminaire behavior choices, five combinations of operational settings are available to quickly get started. These settings are specifically created for different applications and are easily accessible at the luminaire display. Each setting can then be modified as required to take advantage of all of the possible control features.

Setting Title	Profile	Description	Typical Features*
General	Direct	Factory default: For general purpose use including interior architectural applications.	• Standard dimming curve • Regulated output for color consistency
Stage	HSI Plus 7 Enabled	Theatrical lighting: Duplicates the colour and dimming behavior of tungsten stage lighting fixtures.	• Incandescent dimming curve • Regulated output for colour consistency • 3250K white point setting
XT Arch	HSI	Exterior architectural lighting: Provides a high degree of color consistency in high ambient temperature environments.	• Standard dimming curve • Protected output • 3200K white point setting
High Impact	RGB	Event lighting: Enables quickest response, simple RGB control and strobe channel for maximum effect usage.	• Quick dimming curve • Boost mode for maximum intensity • 5600K white point setting
Studio	Studio	Video/film lighting: Enables three parameter control of white light (intensity, white point and tint) via DMX from console or from luminaire display – no console required.	• Linear dimming curve • Regulated output mode for color consistency

*See user manual for complete list of features for each Quick Setup.

CONTROL OPTIONS

DMX Input Channel Profiles

DMX Profile	DMX Channels	Channel Assignments	Notes
Direct	9	1 – Red 2 – Orange (white if Lustr+) 3 – Amber 4 – Green 5 – Cyan 6 – Blue 7 – Indigo 8 – Intensity 9 – Strobe	Direct control of each individual color with a separate master intensity channel. Colour calibration of LEDs is not active in this mode. The nine-channel profile will produce the highest quality colour crossfades.
HSI	5	1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe	High-resolution hue (two-channels), saturation and intensity control. HSI mode will produce colour crossfades around the colour space.
HSIC	6	1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – Colour Point (CCT)	High-resolution hue, saturation and intensity control as above, with the addition of a colour point channel to adjust the colour temperature of the luminaire in both white light and colour. Colour crossfade performance is the same as EHSI.
RGB	5 (Ch. 4 not used)	1 – Red 2 – Green 3 – Blue 4 – n/a 5 - Strobe	Effectively addresses all seven colours via three channels of control. RGB profile will produce medium quality colour crossfades.
Studio	3	1 – Intensity 2 – Colour Point (CCT) 3 – Tint	Controls luminaire as a white light unit. If no DMX (i.e. console input) is present, fixture can be adjusted for these three parameters on the U/I at the back of the unit.
Additional profile options			
Plus 7		Seven additional colour control channels are available in RGB, HSI, HSIC and Studio profile settings. For example: HSI with Plus 7 enabled becomes a 14-channel profile-	
		1 – Hue (coarse) 2 – Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – n/a 7 – Plus 7 control on/off 8 – Red 9 – Orange (white if Lustr+) 10 – Amber 11 – Green 12 – Cyan 13 – Blue 14 – Indigo	The desired colour and intensity is achieved by using the HSI or RGB channels. Placing channel seven at a value over 51% gives the luminaire a 14-channel profile. Channels 8-14 represent the native colours of the luminaire and allow the operator to adjust individual colour channels to fine-tune the colour output.
Strobe		Variable strobe control: 0% is no strobe. The fixture output will strobe more rapidly as the strobe channel value approaches 100%.	

CONTROL OPTIONS

Studio Daylight and Studio Tungsten (only)

Quick Set-Ups

Setting Title	Profile	Description	Typical Features*
Studio	Studio	Simple mode for linear intensity control	• Linear dimming curve • Regulated output for intensity stability
Single Channel	Direct	For general purpose architectural use	• Standard dimming curve • Regulated output for consistency
Stage	Direct	Matches conventional luminaire performance	• Incandescent dimming curve • Regulated output

CONTROL OPTIONS

DMX Input Channel Profiles

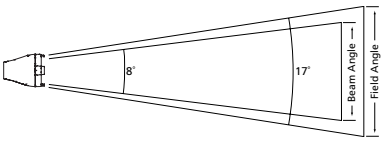
DMX Profile	DMX Channels	Channel Assignments	Notes
Studio	3	1 – Intensity 2 – Strobe 3 – N/A (only used in D60)	Control of parameters is also enabled from the luminaire's user interface. No console required.
Direct	3	1 – Intensity 2 – Strobe 3 – N/A (only used in D60)	

PHOTOMETRICS

D60XTI Vivid™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	17˚	170,540	3,760	1,667	31.9
Regulated	17˚	132,451	3,050	1,305	30

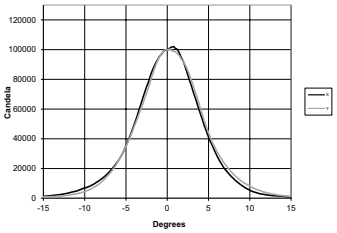
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



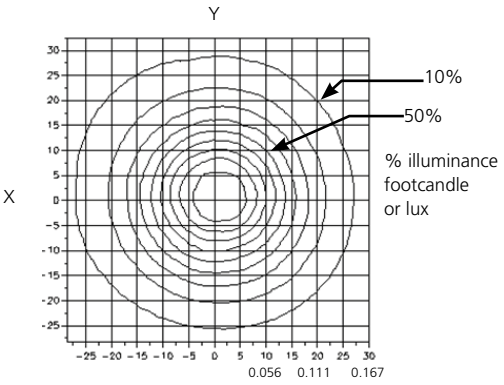
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	0.9m	1.4m	1.8m	2.3m
Illuminance (fc)	1,617	719	404	259
Illuminance (lux)	17,405	7,736	4,351	2,785

For field diameter at any distance, multiply distance by 0.295
For beam diameter at any distance, multiply by 0.145

Cosine Candela Plot



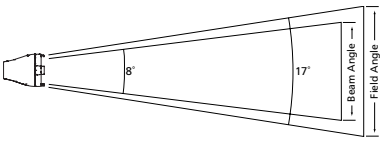
Iso-Illuminance Diagram
(Flat Surface Distribution)



D60XTI Lustr+™

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	16°	195,012	4,317	1,931	34.9
Regulated	16˚	180,097	3,850	1,748	34.3

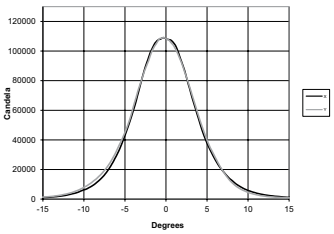
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



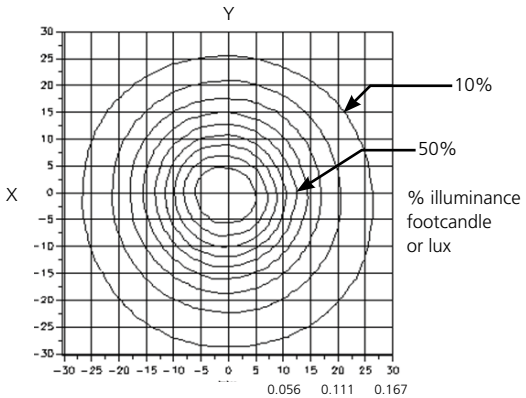
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	0.9m	1.3m	1.8m	2.2m
Illuminance (fc)	1,828	812	457	292
Illuminance (lux)	19,676	8,745	4,919	3,148

For field diameter at any distance, multiply distance by 0.288
For beam diameter at any distance, multiply by 0.112

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)

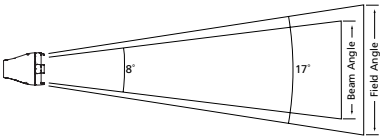


PHOTOMETRICS

D60XTI Fire

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	17˚	177,597	4,112	1,866	37.9
Regulated	17˚	133,760	3,075	1,399	36.6

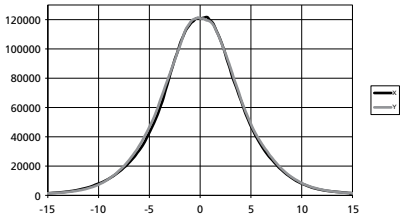
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



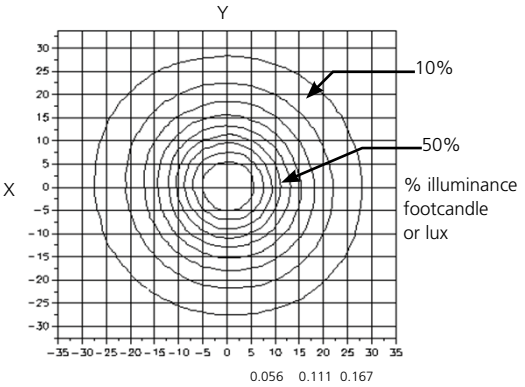
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	.9m	1.4m	1.8m	2.3m
Illuminance (fc)	1,701	756	425	272
Iluminance (lux)	18,309	8,138	4,577	2,930

For field diameter at any distance, multiply distance by 0.301
For beam diameter at any distance, multiply by 0.144

Cosine Candela Plot



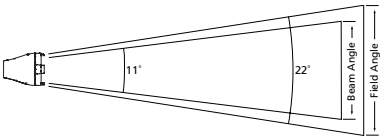
Iso-Illuminance Diagram
(Flat Surface Distribution)



D60XTI Ice

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	16˚	118,965	2,526	1,243	19.7
Regulated	16˚	109,877	2,332	1,149	18.8

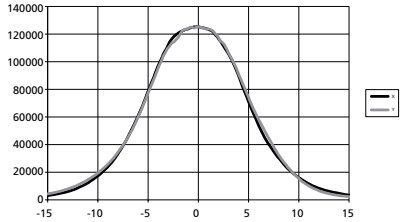
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



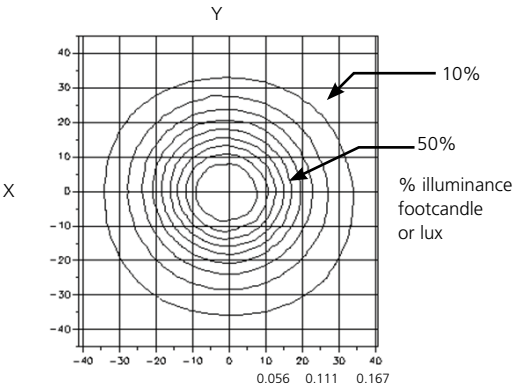
Throw Distance (d)	3.0m	4.6m	6.1m	9.1m
Field Diameter	.8m	1.3m	1.7m	2.1m
Illuminance (fc)	1,284	571	321	205
Illuminance (lux)	13,821	6,143	3,455	2,211

For field diameter at any distance, multiply distance by 0.278
For beam diameter at any distance, multiply by 0.142

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)

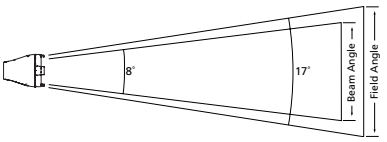


PHOTOMETRICS

D60XTI Studio HD

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	16˚	198,209	4,532	1,916	33.4
Regulated	16˚	185,414	4,224	1,780	33.7

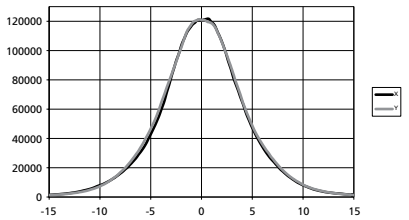
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



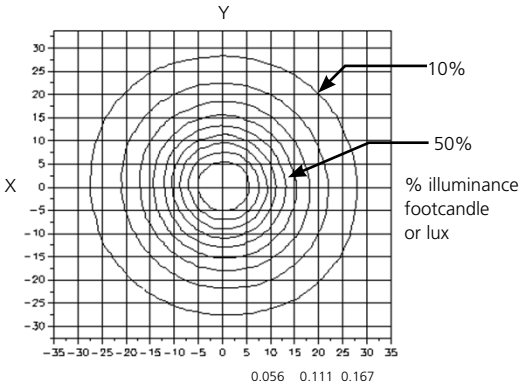
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	0.9m	1.3m	1.7m	2.1m
Illuminance (fc)	2,222	988	556	356
Illuminance (lux)	23,917	10,630	5,979	3,827

For field diameter at any distance, multiply distance by 0.281
For beam diameter at any distance, multiply by 0.142

Cosine Candela Plot



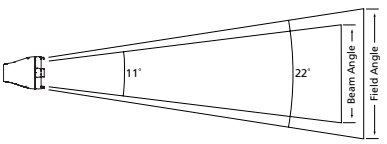
Iso-Illuminance Diagram
(Flat Surface Distribution)



D60XTI Studio Daylight

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	22˚	209,556	8,216	4,068	55.3
Regulated	22˚	193,045	7,610	3,860	54.8

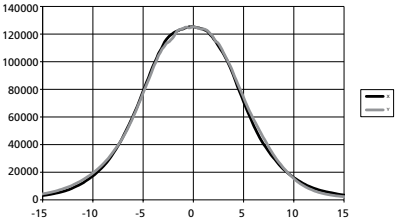
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



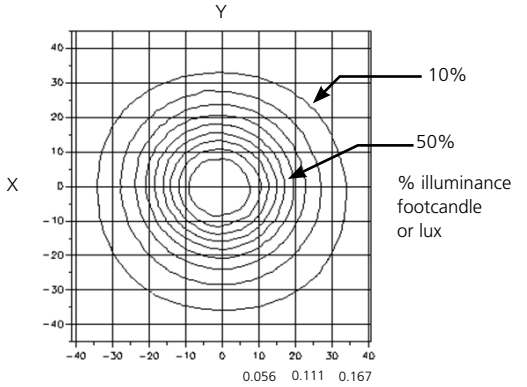
Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	1.2m	1.8m	2.4m	2.9m
Illuminance (fc)	1,895	842	474	303
Illuminance (lux)	20,398	9,066	5,099	3,264

For field diameter at any distance, multiply distance by 0.387
For beam diameter at any distance, multiply by 0.194

Cosine Candela Plot



Iso-Illuminance Diagram
(Flat Surface Distribution)

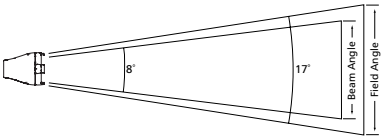


PHOTOMETRICS

D60XTI Studio Tungsten

Mode	Degree	Candela	Field Lumens	Beam Lumens	Lumens Per Watt
Boost - cold	23˚	171,089	6,482	3,001	43.2
Regulated	23˚	162,409	6,172	2,918	39.6

Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



Throw Distance (d)	3.0m	4.6m	6.1m	7.6m
Field Diameter	1.3m	1.9m	2.5m	3.2m
Illuminance (fc)	1,395	620	349	223
Illuminance (lux)	15,020	6,676	3,755	2,403

For field diameter at any distance, multiply distance by 0.414
For beam diameter at any distance, multiply by 0.189

Throw Distance Multiplier (TDM)

To determine the distance from the center of the beam (Origin) to a certain illuminance level at a particular distance, multiply the desired throw distance by the TDM desired on the Iso-Illuminance diagram.

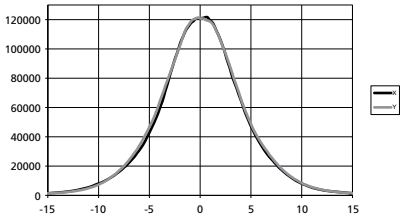
Throw Distance (TD) x Throw Distance Multiplier (TDM) = Distance from the Origin (DfO) (distance from the center of the beam)

Example: 25 feet (TD) x 0.047 (TDM) = 1.175 feet from center of beam (DfO)

For illumination with any lamp, multiply the candlepower of a beam spread by the multiplying factor (mf) shown for that lamp.

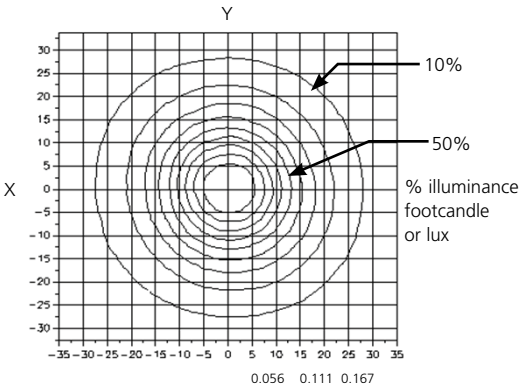
To determine illumination in footcandles or lux at any throw distance, divide candlepower by distance squared.

Cosine Candela Plot



Iso-Illuminance Diagram

(Flat Surface Distribution)



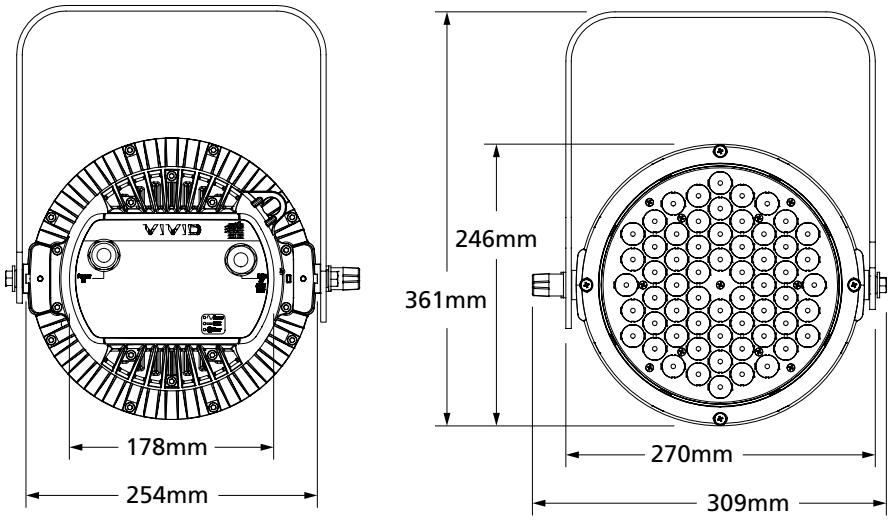
PHYSICAL

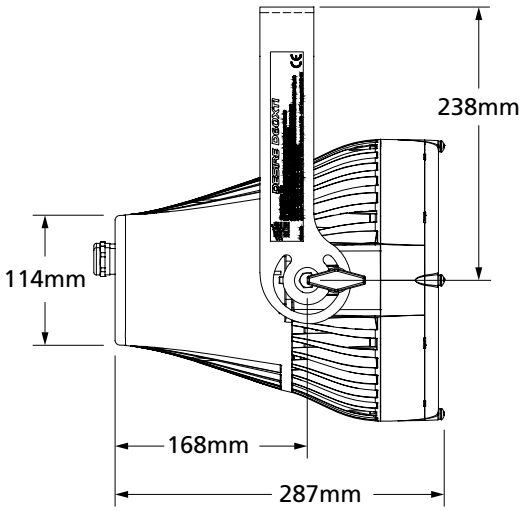
Selador D60XTI Weights and Dimensions

Total weight depends on how the individual luminaire is configured.

WEIGHT*	SHIPPING WEIGHT
kgs	kgs
10.43	11.2

* Does not include mounting hardware





Corporate Headquarters • 3031 Pleasant View Rd, PO Box 620979, Middleton WI 53562 0979 USA • Tel +1 608 831 4116 • Fax +1 608 836 1736
London, UK • Unit 26-28, Victoria Industrial Estate, Victoria Road, London W3 6UU, UK • Tel +44 (0)20 8896 1000 • Fax +44 (0)20 8896 2000
Rome, IT • Via Pieve Torina, 48, 00156 Rome, Italy •Tel +39 (06) 32 111 683 • Fax +44 (0)20 8752 8486
Holzkirchen, DE • Ohmstrasse 3, 83607 Holzkirchen, Germany • Tel +49 (80 24) 47 00-0 • Fax +49 (80 24) 47 00-3 00
Hong Kong • Room 1801, 18/F, Tower 1 Phase 1, Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong • Tel +852 2799 1220 • Fax +852 2799 9325
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